

**Morgan County School District** was looking for a way to improve learning comfort for its

3,000 students in the Fort Morgan area. Students in one classroom wore jackets to keep warm on cold winter days, gas prices jumped by 40 percent, and then the cast-iron boiler at the high school finally gave out. "We were facing problems with comfort, maintenance and high operating costs, but didn't have the budget to fix them. As a former superintendent in New Mexico, I'd seen energy performance contracting work in three different school districts and I knew it could help Morgan County schools too," said Superintendent Dr. Dan Patterson. "So, we used performance contracting to get millions of dollars of improvements in Morgan County schools, with money we'd otherwise be spending on high utility bills."

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# Smart Moves for Fort Morgan Schools

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## Project Description:

Morgan County School District signed an energy performance contract in 2002 with an energy service company (ESCO). The project is guaranteed to save \$257,000 per year in lower utility bills, a 44% reduction. These savings will pay for the \$2.5 million project over twelve years.

Schools were modernized by repairing and upgrading controls, replacing aging heating systems and upgrading the lighting systems.

The ESCO installed new boilers in the high school in time to keep students warm

**"We were wasting a lot of energy. Nowadays, we need to be more efficient and squeeze every penny."**

*- Dr. Dan Patterson Superintendent*



*Superintendent Dr. Dan Patterson  
and Assistant Superintendent Phil Stadler*

in the winter. New, high efficiency boilers were installed in three schools. They save energy, reduce maintenance and take up less than half the space of the old boilers.

## Under Control:

A major accomplishment was the upgrade and interconnection of control systems throughout the district. Electronic controls replaced failing pneumatic controls, and now all controls are networked and Internet-accessible. Room-by-room controls were added in most buildings, allowing each teacher to control comfort of the classroom. Ventilation fan speeds in gyms and auditoriums are now controlled by carbon dioxide sensors to ensure the delivery of adequate fresh air when

# An Energy Performance Contracting Success Story



*High School gymnasium facelift included a new lighting system and radiant heating.*

fully occupied and to avoid unnecessary energy use when unoccupied.

## ***Bright and comfortable:***

In the high school gymnasium, radiant gas heaters replaced inefficient unit heaters. Along with improving the aesthetics of the gym, the air temperature for the basketball players stays cool, while spectators in the stands stay warm with radiant heaters overhead. Metal halide light fixtures dramatically improve the quality of lighting in the space compared to the old fluorescent fixtures.

## ***Tight Budget, Smart Strategy:***

"Performance contracting paid for improvements we don't have to ask taxpayers to pay for," said Dr. Patterson. "Performance contracting is a financially responsible way to improve comfort and indoor air quality for our students and teachers."



*High efficiency, stainless steel boilers save energy and valuable space.*

## **PROJECT DETAILS**

**Facility:** Morgan County School District R-3

**Facilities:** Renovations on 11 buildings including 8 schools, district office and support buildings; 528,000 square feet total

**Type of Agreement:** Energy performance contract with guaranteed savings, financed through municipal lease-purchase agreement

**Project Cost:** \$2.5 million investment in facilities

**Energy and Water Cost Savings:** \$257,000 per year guaranteed, plus \$52,000 annual maintenance savings and \$51,000 in capital cost avoidance for a total of \$360,000 per year.

**Contract Term:** 12 years

**Schedule:** contract signed June 2002; work completed June 2003

### **Energy & Water Efficient Features:**

- New lighting equipment & controls
- New high efficiency boilers
- Internet-accessible direct digital controls system
- Room-by-room controls in most buildings
- Low-E windows in two elementary schools
- Variable speed fans and pumps

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